IDAHO Buletin



Office of Epidemiology and Food Protection Idaho Department of Health and Welfare

P.O. Box 83720 450 W. State Street, 4th Floor Boise, Idaho 83720-0036 www.epi.idaho.gov

Idaho Disease Bulletin Contributing Staff

Christine G. Hahn, MD State Epidemiologist

Leslie Tengelsen, PhD, DVM Deputy State Epidemiologist

Jared Bartschi, MHE Epidemiology Program Specialist

Kris Carter, DVM, MPVM Career Epidemiology Field Officer

James Colborn, PhD, MSPH EIS Officer

> Robert Graff, PhD CIE Epidemiologist

Patrick Guzzle, MPH Food Protection Program Manager

Kathy Turner, MPH Epidemiologic Data and Surveillance Program Manager

Ellen Zager, MS, DLSTHM Epidemiology Program Specialist

Other Contributors
Bill McKnight, PA-C

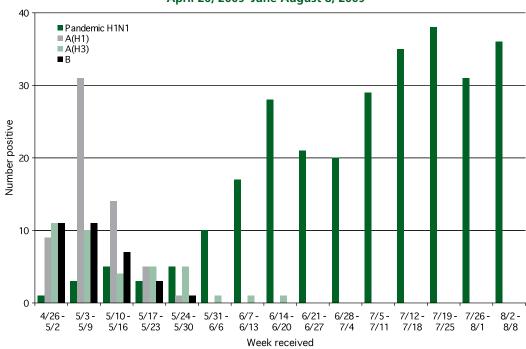
more inside

- Snakebites in Idaho
- ► The Changing Epidemiology of Syphillis in Idaho

The Virus Formerly Known as Swine: Planning for Fall

he novel influenza virus that caused an outbreak last spring has now been declared by the World Health Organization to be a pandemic virus. Despite the lack of media interest, cases of influenza due to the pandemic (H1N1) strain continue to occur worldwide, including throughout the United States and in Idaho. The graph below illustrates recent activity, showing that as seasonal strains have disappeared, the number of cases of influenza due to the pandemic strain detected at the Idaho Bureau of Laboratories (IBL) have increased weekly.

Figure: Influenza positive PCR results at IBL by week received, April 26, 2009–June August 8, 2009



Among hospitalized cases reported nationwide, the median age is 37 years, with very few persons aged ≥65 years reported to have been hospitalized. Among fatal cases, 85% have a reported underlying condition, with asthma, other pulmonary disease, diabetes, and chronic cardiovascular disease the most commonly reported. What can be expected for this fall? The experts seem to agree: based on the current limited understanding of how new influenza strains enter and are sustained in the human population, it is impossible to predict how common, or severe, cases of pandemic influenza may be in the United States this fall. Planning efforts are assuming that cases will continue to occur and will probably increase; illness severity will be the same or worse than what was seen this spring; and that vaccine with a new pandemic influenza vaccine will be available sometime this fall.

-continued next page

In Idaho, a temporary rule is being proposed that will go into effect September 1, 2009, requiring physicians to report HOSPITALIZED or fatal probable or confirmed cases of novel influenza. An overall influenza surveillance plan for this season is being developed in coordination with CDC, the public health districts, and Idaho hospitals to monitor the number and ages of all persons hospitalized with confirmed influenza (seasonal, pandemic, and undetermined strains) to assist hospitals, preparedness planners, and policy makers to determine how severely the influenza outbreak is impacting Idaho providers and hospitals. Physician reporting of hospitalized and fatal cases of probable and confirmed cases of novel (pandemic) influenza will assist this effort.

In addition, recent new information helpful to planning efforts includes:

A recent Science article (Enserink M, Ferrets Shed Light on New Virus's Severity and Spread. *Science* 3 July 2009: 17) demonstrated that in ferrets, a good animal model for studying human influenza infection, the new virus is more pathogenic than seasonal influenza, but not as dangerous as the 1918 pandemic virus or H5N1 avian influenza. There was less clarity on how easily the virus spreads: one team concluded it does so very well, but the other believes it is only moderately adept at spreading from one animal to the next.

Some physicians in the private sector will be asked to participate in pandemic influenza vaccination, and also will be **strongly encouraged to begin** *seasonal* **influenza vaccination as soon as vaccine is available**; some doses of seasonal influenza vaccine may be available as early as late August.

On July 29th, the Advisory Committee for Immunization Practices recommended the following 5 groups be targeted initially to receive pandemic influenza vaccine: Pregnant women, caretakers of infants <6 months of age, children and young adults age 6 months through 24 years, adults age 25 through 64 with chronic conditions placing them at high risk of severe influenza infection, and healthcare workers and emergency medical service providers. If enough vaccine is available, healthy adults age 25-64 will be added to the group; lastly, adults age 65 and over may be vaccinated if additional vaccine is available. There is still great uncertainty as to how much vaccine will be available, and what the start date for vaccination may be: currently, we are expecting that October 15th will be the most likely date, but there is still discussion at CDC of pushing out some doses of vaccine as soon as September 15th.

Significant questions remain unanswered as of this writing, with a few outlined below.

- 1. Will pandemic influenza vaccine be available at the same time as seasonal flu vaccine? Currently, studies are underway evaluating the safety of administering both pandemic and seasonal vaccine at the same visit. Is this even desirable, or is it better to keep vaccination efforts as separate as possible in order to track adverse events and decrease the likelihood of confusion between the vaccines?
- 2. Will the public be eager to accept a pandemic vaccine, or will they stay away?
- 3. Assuming some private healthcare providers will be asked to administer pandemic flu vaccine, will they

- be eager to administer a vaccine, or choose not to?
- 4. Will the vaccine be an FDA-licensed product, or be administered under an Emergency Use Authorization (which will be required if adjuvants are included that are not usually part of the seasonal flu vaccine)? This will not be determined until after initial clinical data are available, hopefully in August, although efforts are being made to avoid this scenario if possible.
- 5. Will two doses of pandemic flu vaccine be required for everyone (almost certainly, probably 21 days apart)?
- 6. Will healthcare providers be able to collect reimbursement for administration costs? (It appears that will be possible, but lots of work is being done on this issue).
- 7. How will administration of vaccine and adverse events best be monitored, including special surveil-lance for Guillain-Barre Syndrome (work is ongoing in this area, including work with medical professional associations)?
- 8. What protective measures will be recommended for healthcare workers evaluating persons with influenzalike illness (*e.g.*, N-95 respirators or surgical masks)? This is very controversial area, with the HICPAC committee recommending a more modest approach; this has not yet been adopted by CDC and may not be due to concerns about employee safety).

These and other questions are all being actively addressed, and ongoing evaluation of influenza activity in the southern hemisphere will help inform many of these. In Idaho, active planning efforts are continuing. We will strive to keep healthcare workers apprised of new recommendations as they are made, taking care to ensure that our information is always "added value" in addition to information coming from the CDC and other entities. We expect the situation to be very dynamic, as it was this past spring, and appreciate your feedback as the situation progresses. We anticipate posting Idaho-specific guidance to our website at **www.flu.idaho.gov** and will be issuing health alerts and press releases as necessary to keep you up-to-date on the current situation and recommendations in Idaho. Meanwhile, what can you do? These can be done now:

Ensure that your office is enrolled to receive health alerts, including your current preference for email versus fax notification. If you have doubts, you or your staff may find enrollment and registration information on the Idaho HAN website at https://health.dhw.idaho.gov/IDHAN/Form/Misc/contact_us.aspx.

Encourage your patients with indications to consider the pneumococcal vaccine and the seasonal influenza vaccine.

Keep abreast of news on this topic, especially regarding the plans for including private sector providers in vaccination, disease screening, case reporting, treatment, prophylaxis, and isolation efforts.

We and the public health districts will continue to work together to inform you and your staff on the current severity and impact of influenza in Idaho, current recommendations on prevention including immunization, and other news important to your practice.



Venomous Snakebites

Approximately 2,000 venomous snakebites occur annually according to a survey of the American Association of Poison Control Centers done by Gold BS, et al.1 This figure is likely an underestimate of the true nationwide incidence because snakebites are not reportable and not all incidents are documented through poison control call centers. Snakebite calls to poison control centers usually report a bite from a rattlesnake; however, calls may also report bites from other venomous wild or privately held exotic and non-poisonous snakes. Approximately five venomous snakebite-associated fatalities occur each vear in the United States. 1 No definitive data are available on the number of annual snakebites occurring in Idaho; however, data are available from calls made to the Rocky Mountain Poison and Drug Center (RMPDC).2 As of August 3, 2009, the RMPDC received 41 calls from Idaho between 2006 and 2009 regarding snakebite management. Calls were classified by snake type: 63% crotalids (i.e., rattlesnakes, unknown crotalids); 22% unknown snake type; 14.6% non-poisonous snakes. Calls were logged by the zip code of the caller (which may or may not represent the exposure location). Calls specifically for rattlesnake bites came from multiple locations across the state; calls originating from south and southwestern Idaho account for 72% of calls (Figure 1).

Figure 1. Rattlesnake Bite-associated Rocky Mountain Poison Control Center Calls, by call zip code, 2006–2009*



The Western Rattlesnake (Crotalus viridis) is the only venomous snake indigenous to Idaho.3 They live primarily in dry, rocky terrain in the southern and central regions of the state and have been found at elevations up to 11,000 feet. There are three subspecies: the Prairie Rattlesnake (Crotalus viridis viridis), the Great Basin Rattlesnake (Crotalus viridis lutosus), and the Northern Pacific Rattlesnake (Crotalus viridis oreganus). All three have differing coloration and habitat preferences, but are otherwise similar. They may reach up to five feet in length and are thick muscular snakes with tail rattles and a classic triangular head. They become active around 60°F, with peak activity occurring between 70°F and 90°F.

The venom of the Western Rattlesnake is hemotoxic, consisting of a combination of enzymes responsible for local tissue damage and a consumptive coagulopathy.1 Bites may include one or more fang marks, puncture wounds, and scratches. Upon envenomation, intense pain can develop within five minutes along with a gradual increase in swelling and bruising at the site. Onset of systemic symptoms soon follows and might include tingling of the extremities, nausea, vomiting, muscle fasciculation, and/or weakness. On rare occasions, direct cardiotoxicity, anaphylaxis, or direct envenomation of the blood stream may occur.

Outcomes appear to be dose-dependent. Fatalities occur in the very young or very old, and in individuals with multiple bites. Most bites occur on the extremities, typically resulting from deliberate attempts to handle or harm the snake. Estimates vary, but it is believed 20%–30% of all rattlesnake bites are 'dry bites,' involving no clinically significant envenomation.

When presented with a presumed snakebite, obtain a thorough history of the exposure circumstance to determine what type of snake was involved. Exposure during outdoor recreation is typical; however, exposures from private venomous snake collections (within facilities or from exotic snakes released into urban settings) are possible. First aid in a field setting consists primarily of cleaning and covering the wound, splinting the limb below the level of the heart, and

evacuating the patient to a medical facility quickly with as little exertion on the part of the patient as possible. Various treatments such as "cut and suck," tourniquet, cryotherapy, or electric shock have little proven success, and in most cases prove harmful. Removal of rings, watches, and bracelets prior to the development of edema is warranted.^{4,5}

Modern snakebite treatments have been available since the 1950s with the introduction of an equine-derived antivenin. In 2000, ovine Crotalidae immune fab-purified FabAV (CroFab®) was introduced by Savage Laboratories (http://www.savagelabs.com/ Products/CroFab/Home/crofab_ frame.htm). Hypersensitivity reactions to CroFab® do occur, particularly in those with sensitivities to papaya or papain, but are thought to be much less frequent or generally less severe than those associated with the now discontinued equine-derived product. CroFab® is a highly purified polyvalent antivenin containing four monospecific antivenins made from sheep inoculated with the venom of one of three common North American rattlesnakes or the Cottonmouth. Antivenin is most beneficial if initiated in the first four to six hours for patients with minimal or moderate North American crotalid envenomation, to prevent clinical deterioration and the occurrence of systemic coagulation abnormalities.

Rattlesnakes play a crucial role in helping control the population of various rodents in Idaho. They generally pose little risk to people enjoying the outdoors if caution, particularly around rocky areas, and good sense are used.

The RMPDC provides medical consultation on management of situations involving snake envenomation.²

REFERENCES

- 1 Gold, BS et al. Bites of Venomous Snakes. New England Journal of Medicine Vol. 347, No. 5 pp. 347-356 (2002)
- 2 Rocky Mountain Poison and Drug Center, (1-800-222-1222) http://www.rmpdc.org/
- 3 The Western Rattlesnake, Idaho Museum of Natural History http://imnh.isu.edu/DIGITALATLAS/bio/reptile/serp/crvi/crvifram.htm
- 4 Auerback, Paul S. Wilderness Medicine. Management of Wilderness and environmental emergencies. third edition.1995, Mosby pp 680-709.
- 5 Jim Blackman, MD, WWAMI, personal communication.

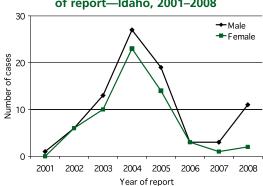


The Changing Epidemiology of Syphilis in Idaho

The number of syphilis cases in Idaho is rising again – this time in men who have sex with men (MSM). The last large outbreak of early syphilis occurred in 2004 among residents in southwest Idaho. Reported cases were mainly among young heterosexuals and reports had subsided to pre-outbreak levels by 2006.

In 2008, 11 males were reported with early syphilis, compared with only 2 females. This difference in the number of cases between the sexes has been widening since 2006 (Figure 1). Among males reported with early syphilis, an increasing proportion have been MSM (Figure 2). The median age of MSM reported with early syphilis in 2008 was 44, but ages ranged widely (23–68). This change

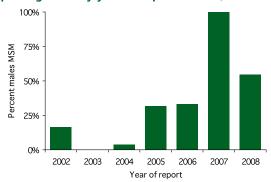
Figure 1. Early syphilis by sex and year of report—Idaho, 2001–2008



in syphilis epidemiology was preceded by national trends. National trends in syphilis have indicated incidence among MSM has been on the rise since 2000 and HIV coinfection has increased proportionately. The Centers for Disease Prevention and Control (CDC) recommends persons diagnosed with syphilis also be tested for HIV.

Unusual serologic responses have been reported among individuals with HIV, mostly in the form of higher than expected serologic titers. Coinfected individuals might be at increased risk for neurologic complications and higher treatment failure rates. Health care providers can access information in the CDC STD Treatment Guidelines at: http://www.cdc.gov/STD/treatment/2006.

Figure 2. Proportion of male early syphilis cases reporting MSM by year of report—Idaho, 2002–2008



Current and past issues are archived online at overent and past issues.

An electronic version of the Rules and Regulations are selectronic version of the sesses and the hunot and the sesses id aldetroepon of the hunot selective in the selection of the selection of

ROUTINE 24-Hour Disease Reporting Line 1.800.632.5927 EMERGENCY 24-Hour Reporting Line 1.800.632.8000

PRSRT STD
U.S. Postage
Permit No. 1
Dispersive to the state of the sta

Division of Health P.O. Box 83720 Boise, ID 83720-0036

